**Vishay Sfernice** 

**Single Value Wirebondable Thin Film Chip Resistors** 



www.vishay.com

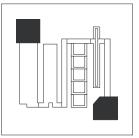
Chromium silicon thin film is very well suited to produce high density and high ohmic value resistor chips. These high ohmic value chip resistors are available with improved performances and size when compared to thick film counterparts.

### SCHEMATIC AND PATTERN

## w

## **FEATURES**

- Small size 20 mil x 20 mil
- Very high ohmic value up to 10 MΩ
- · Aluminum or gold terminations
- · Good stability 0.1 % (2000 h, rated power at + 70 °C)
- Wirebondable
- · Material categorization: For definitions of compliance please see www.vishay.com/doc?99912



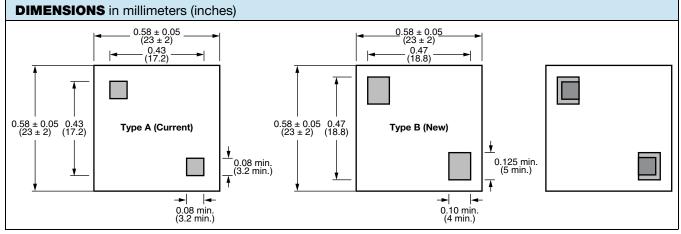
STANDARD ELECTRICAL SPECIFICATIONS						
MODEL	SIZE	RESISTANCE RANGE Ω	RATED POWERLIMITING ELEME $P_{70^{\circ}C}$ VOLTAGEWV		TOLERANCE ± %	TEMPERATURE COEFFICIENT ± ppm/°C
CS22	0202	10K to 10M	0.05	100 (1)	0.5, 1, 2	50, 100

#### Note

<sup>(1)</sup> Higher on Al<sub>2</sub>O<sub>3</sub>

CLIMATIC SPECIFICATIONS				
Operating temperature range	- 55 °C to + 155 °C			
Storage temperature range	- 55 °C to + 155 °C			

#### **MECHANICAL SPECIFICATIONS** Resistive element Chromium silicon Passivation Silicon nitride Substrate material Silicon (consult Vishay for Al<sub>2</sub>O<sub>3</sub>) Bonding pads Aluminum or gold



#### Note

٠ Customer can get one or the other part, but positions of pads are similar.

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1 For technical questions, contact: sferthinfilm@vishay.com Document Number: 60063

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COMPLIANT HALOGEN

FREE

GREEN

(5-2008)





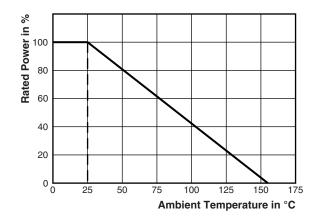
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## Vishay Sfernice

DIMENSIONS in millimeters (inches)						
0.4 max.  ◄ (15.75 max.) ►						

TECHNICAL SPECIFICATIONS						
TEST	SPECIFICATIONS	CONDITIONS				
Stability	± 0.1 % typical, ± 0.2 maximum	2000 h at + 70 °C at Pn				
Noise	< - 20 dB typical	MIL-STD-202 method 308				
Thermal EMF	< 0.01 µV/°C					
Shelf life stability	200 ppm	1 year at + 25 °C				

### DERATING



GLOBAL PART NUMBER INFORMATION							
New Global Part Numbering: CS22-100KD0016 (preferred part number format)							
C S 2	2	- 1	0	0 K	D	0	0 1 6
GLOBAL MODEL		VALUE	TOLE	RANCE	TERMINATIONS	3	OPTION
		Decimal	<b>D</b> = ± 0.5 %		Blank = Aluminum		Leave blank
		R, K or M	$F = \pm 1.0 \%$		<b>G</b> = Gold		if no option
	<b>G</b> = ± 2.0 %						
Historical Part Number example: CS22 150K 0.5 % R0016 (will continue to be accepted)							
CS22		150K		0.5 %		R0016	
HISTORICAL MODEL		VALUE		TOLERANCE		OPTION	

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Vishay

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